

The Role of Private Property in the Nazi Economy

by

Christoph Buchheim
Jonas Scherner

The Role of Private Property in the Nazi Economy: The Case of Industry

CHRISTOPH BUCHHEIM AND JONAS SCHERNER

Private property in the industry of the Third Reich is often considered a mere nominal provision without much substance. However, that is not correct, because firms, despite the rationing and licensing activities of the state, still had ample scope to devise their own production and investment profiles. Even regarding war-related projects, freedom of contract was generally respected; instead of using power, the state offered firms a number of contract options to choose from. There were several motives behind this attitude of the regime, among them the conviction that private property provided important incentives for increasing efficiency.

The Nazi regime did not have any scruples in applying force and terror, if that was judged useful. And in economic policy it did not abstain from numerous regulations and interventions in markets, in order to further rearmament and autarky as far as possible. Thus the regime, by promulgating Schacht's so-called New Plan in 1934, very much strengthened its influence on foreign exchange and on raw materials allocation, in order to enforce state priorities. Wage-setting became a task of public officials, the capital market was reserved for state demand, and a general price freeze was decreed in 1936.¹ In addition, state demand expanded without precedent. Between 1932 and 1938 it increased at an average annual rate of 26 percent; its share in GNP exploded in these years from 13.6 to 30.5 percent.² As a consequence, private consumption as well as exports were largely crowded out.

A major part of the rise of state demand was in the form of orders for manufacturing enterprises. Thus it could have appeared quite rational to the state authorities to create state firms for their execution. In that case the state would have been able to save the large profits that in fact were paid to companies that engaged in the production for state demand.³

The Journal of Economic History, Vol. 66, No. 2 (June 2006). © The Economic History Association. All rights reserved. ISSN 0022-0507.

Christoph Buchheim is Chair of Economic History; University of Mannheim; L 7, 3-5; D-68131 Mannheim; Germany. E-mail: buchheim@rumms.uni-mannheim.de. Jonas Scherner; Seminar of Economic and Social History; University of Mannheim; L 7, 3-5; D-68131 Mannheim; Germany. E-mail: scherner@rumms.uni-mannheim.de.

The authors profited from discussions of the article in the Economic History Section of the *Verein für Socialpolitik* and with the participants of the Economic History Seminars in Barcelona, Berkeley, Frankfurt/Main, Harvard, Tübingen, and Yale. We are also thankful for the recommendations of three anonymous referees.

¹ An overview of this regulatory activity can be found in Barkai, *Nazi Economics*.

² Ritschl, *Deutschlands Krise und Konjunktur*, table B.5.

³ For profits see Spoerer, *Scheingewinne*. A short version in English is Spoerer, "Industrial Profitability."

However, the state did not proceed along this path. There occurred hardly any nationalizations of private firms during the Third Reich.⁴ In addition, there were few enterprises newly created as state-run firms. The most spectacular exception to that rule was the *Reichswerke Hermann Göring*, which was founded in 1937 for the exploitation of German low quality iron ore deposits.

An important question treated in this article is why the Nazi state—unlike the Soviet Union to which it is sometimes compared—refrained from the widespread nationalization of industry. In view of the violence displayed by the regime otherwise it can be taken for granted that the reason was not any respect for private property as a fundamental human and civil right.

This question obviously has something to do with the problem of how to interpret the relationship between state and industry during the Third Reich. The debate about that problem dates back to the beginning of the National Socialist dictatorship itself. Today many historians think that the Nazi state played a primary role, largely depriving companies of the opportunity to make autonomous decisions. There have been others, however, who considered the regime as an instrument of big business by which the latter emerged from the Great Depression even more powerful than before.⁵ “Big Business” is indeed the right term with regard to the second hypothesis, because it did not deal with industry in general, but focused on “organized capitalism,” namely industrial organizations, cartels, and trusts such as the companies of heavy industry or IG Farben. In a well-known early book, Franz Neumann pointed to the increased strength accruing to this kind of capitalism as well as to an alleged community of interest with the Nazi Party regarding territorial expansion of the Reich. Therefore Neumann felt entitled to speak of an alliance between the party and big industry, supplemented by the military and the bureaucracy. According to his view, each of these, in furthering its aims, was dependent on the other three.⁶

Similarly, Arthur Schweitzer detected a coalition of the party, the generals, and big business, which originally was quite successful in achieving its mutual aims—above all rearmament and the suppression of trade unions. However, this first phase of the Third Reich—termed “partial fascism” by Schweitzer—gave way to “full fascism” from 1936 onwards due to internal disunity among big business and the generals,

⁴ One prominent exception were the Junkers airplane factories, which were expropriated in 1933/35 with full compensation payments to the former owner family; Budraß, *Flugzeugindustrie*, pp. 320–35.

⁵ A good overview of the older debate is provided by Kershaw, *Nazi Dictatorship*.

⁶ Neumann, *Behemoth*.

allowing the Nazis to seize economic and military leadership.⁷ Although not accepted by orthodox Marxist writers who continued to speak of state monopoly capitalism throughout, the “full fascism” approach to the problem of state-industry relations became increasingly fashionable among all kinds of historians in the West.⁸ Thus, in a famous article Tim Mason argued that the Third Reich was characterized by the “primacy of politics.” Rearmament, according to Mason, “meant that the *direct* relationships with the agencies distributing contracts became more important for most big firms than *collective* dealings with the state through the channels of the economic and industrial organizations. . . . The capitalist economic structure largely disintegrated into its constituent components. It was easy for the huge armaments firms to prosecute their immediate material interests, but in the process the responsibility for the overall economic system was left to . . . political leadership.”⁹

Unfortunately, Mason did not define the “immediate material interests” of industry. But the phrase appears equivalent to profit seeking. If so, Richard Overy at first sight seemed to be echoing Mason in writing about the Ruhr companies: “Though they could still profit from the system, they were forced to do so on the party’s terms. Profit and investment levels were determined by the state, on terms much more favourable to state projects. . . . Rational calculation gave way to the ‘primacy of politics’.”¹⁰ However, closer inspection reveals a big difference from what Mason thought. For the last sentence of the quotation implies that companies had relinquished rational calculation of their *own* business affairs. By that, entrepreneurs would have been degraded to state functionaries, who were permitted to earn money, but only by slavishly fulfilling state orders (in both senses of the word!). In fact Overy felt justified in concluding: “In the long run the movement was moving to a position in which the economic New Order would be controlled by the Party through a bureaucratic apparatus staffed by technical experts and dominated by political interests, not unlike the system that had already been built up in the Soviet Union.”¹¹

Peter Temin in his Lionel Robbins lectures characterized the Nazi economic system as a certain “brand of socialism.” By doing so he emphasized three distinguishing properties of “socialism,” namely public

⁷ Schweitzer, *Big Business*.

⁸ For an orthodox Marxist writer see, however, Eichholz, *Geschichte der deutschen Kriegswirtschaft*, vol. 1, pp. 48–53; here Schweitzer’s opinion was explicitly criticized. Instead, Eichholz maintained that there was only a change of leadership within big business making it even more powerful and aggressive.

⁹ Mason, “Primacy,” pp. 53–76, especially 68.

¹⁰ Overy, *War*, p. 106.

¹¹ Ibid., p. 118.

ownership or regulation of key industries, heavy government involvement in wage determination, and a “social dividend” for everyone.¹² And indeed the Nazi regime smashed trade unions in the spring of 1933 and replaced collective wage bargaining with a bureaucratic procedure. However, it is very doubtful whether there was a social dividend for everyone, for in any case Jews were deliberately excluded from it.¹³

In our context the first criterion of Temin’s definition is the most important one. With regard to the Third Reich it was stated more precisely: “Instead of dispossessing private owners, the Nazis severely circumscribed the scope within which the nominal owners could make choices.”¹⁴ Interestingly enough, Temin spoke of “nominal owners” implying that in the German economy of the Nazi period there was not much left of the right of disposal over one’s private firm. That is underlined in a later article of the same author where he pointed to the allegedly unequal long-term contracts between the Nazis and industry constituting an obligation of the latter to deliver its output at fixed prices. If firms refused, they could be nationalized.¹⁵ Characteristically, in his second paper Temin endeavored to prove that in the thirties the Nazi economic system was very similar to the Soviet one.¹⁶ By doing so he not only agreed with the observation of Overy quoted above, but seems to have implicitly reversed the description of the economy of the Third Reich in his earlier publication where he explicitly compared the Nazi system with the mixed economies of the West.

The notion that under the Nazi regime “only the shell of private ownership” was left can also be found in some of the most recent publications.¹⁷ Michael von Prollius stated in his book on the economic system of the Third Reich that the autonomy of enterprises was restricted to their internal organization and that private property had been without much real substance. For relations of firms with the outside world were

¹² Temin, *Lessons*, p. 111.

¹³ For the rest of the German population full employment constituted, according to Temin, the social dividend achieved. However, that has to be seen in the right perspective, because material living standards, despite a considerably longer work week, hardly increased above crisis level for those who had had employment throughout—notwithstanding the Nazi propaganda and many promises for the future. Compare Hachtmann, *Industriearbeit im ‘Dritten Reich’*; and Steiner, “Lebenshaltungskostenindex.”

¹⁴ Temin, *Lessons*, p. 117.

¹⁵ Temin, “Economic Planning,” p. 576.

¹⁶ Incidentally, in this article Temin also appears to contradict his former opinion that the Nazi brand of socialism provided a social dividend to the workers, because he draws the following conclusion pertaining to both, Soviet Russia as well as Nazi Germany: “Socialism in the 1930s was far from benign. Its goal was national power, not the welfare of ordinary workers” (p. 592).

¹⁷ For the quotation, see Temin, “Economic Planning,” p. 580; here Temin approvingly quotes M. Y. Woolston, *The Structure of the Nazi Economy* (New York: Russell, 1968).

totally subordinated to state direction.¹⁸ And Peter Hayes, writing about the firm of Degussa, described the situation in the following way: "Sealed by the proclamation of the Four Year Plan in 1936, the 'indirect socialization' that industrialists had exaggeratedly bewailed as the hallmark of economic policy in the Weimar Republic became a scarcely contested reality under Nazism."¹⁹ Other authors have stressed the regime's ability to nationalize uncooperative firms, as did Temin.²⁰

Today there is little doubt that the assertion of industry being an equal ally to the party in determining the fate of Germany during the Nazi period was not well founded. In this sense politics certainly took primacy over the economy, as was argued by Mason. However, that does not necessarily mean that private property of enterprises was not of any significance. In fact the opposite is true, as will be demonstrated in the second section of this article. For despite extensive regulatory activity by an interventionist public administration, firms preserved a good deal of their autonomy even under the Nazi regime. As a rule freedom of contract, that important corollary of private property rights, was not abolished during the Third Reich even in dealings with state agencies.²¹

But it is not so obvious why widespread nationalization of industry was not undertaken. For it definitely cannot be argued that there existed a kind of quasi-socialization with private firm property only preserved nominally. Thus it appears to be worthwhile to analyze the regime's reluctance to encroach too much on the autonomy of private companies. That will be done in the third section. Finally, we will suggest a general characterization of the Nazi economic system with respect to industry by combining the two elements, namely widespread state regulation and the preservation of significant private property rights.

MEANINGFUL PRIVATE PROPERTY RIGHTS UNDER THE NAZI REGIME

The notion that private firm property during the Third Reich had been preserved only in a nominal sense and that in reality there was almost nothing left of the autonomy of enterprises as economic actors is severely flawed in at least three respects:

Despite widespread rationing of inputs, firms normally still had ample scope to follow their own production plans.

¹⁸ von Prollius, *Wirtschaftssystem der Nationalsozialisten*, pp. 229–31, 276–77.

¹⁹ Hayes, *Degussa*, p. 114.

²⁰ Lorentz/Erker, *Chemie*, p. 9; and Wagner, *IG Auschwitz*, p. 36.

²¹ From the outset it has to be understood that this only applied to firms considered to be Aryan.

Investment decisions in industry were influenced by state regulation, but the initiative generally remained with the enterprises. There was no central planning of the level or the composition of investment, neither under the Four Year Plan nor during the war.

Even with respect to its own war- and autarky-related investment projects, the state normally did not use power in order to secure the unconditional support of industry. Rather, freedom of contract was respected. However, the state tried to induce firms to act according to its aims by offering them a number of contract options to choose from.

Autonomy of Firms in Deciding About Production

In contrast to a socialist economy of the Soviet type, rationing of inputs in the Third Reich was not accompanied by material balancing.²² That means the exact allocation of inputs with regard to specific output needs was generally not planned beforehand. Of course, the production of an increasing selection of goods was quantitatively restricted or even forbidden, a tendency greatly intensified during the war. But on the other hand most enterprises could freely choose among a whole range of production possibilities, all of which had privileged access to rationed materials, including the making of almost every finished product for export, because exports commanded a very high priority. In addition there often was allotted a quota of rationed inputs for unspecified use.

A good example is provided by the textile industry, which was the fourth largest industrial employer behind metal processing, food, and clothing and was far bigger than chemicals.²³ From spring 1934 onwards the purchase of raw materials was regulated in the textile industry. Later, quotas were established, which in principle restricted for each firm the processing of materials to a certain percentage according to a reference period. In addition, beginning in 1936 enterprises were required to mix a minimum amount of artificial fibers with their inputs of natural raw materials. Within this rationing framework, however, firms generally remained free to produce those varieties of textiles they considered most profitable to them, even though the regular input quotas were decreasing in the course of time. But the regime also established a system of incentives consisting of extra rations of scarce raw materials allotted to firms that undertook to manufacture textiles for high priority requirements. All export orders were privileged in this way, which opened up to entrepreneurs much additional scope for autonomous deci-

²² That also is the view of Temin ("Economic Planning," p. 576).

²³ Hoffmann, *Wachstum der deutschen Wirtschaft*, pp. 198–99; for the following see Höschle, *Deutsche Textilindustrie*.

sion making and production. In a similar way military orders as well as those of other state agencies commanded extra quotas of input materials, which enterprises could compete for. Thus, the German textiles industry of the Nazi period certainly did not work in an institutional setting of liberal markets. But neither was it one of complete state direction and central planning. Private ownership of firms still had economic significance, because entrepreneurs preserved a good deal of their autonomy with regard to the profile of their production until after the outbreak of war.²⁴ That also is true for the price setting behavior. There existed numerous exceptions to the rule of fixed prices, which gave textiles firms the opportunity to considerably increase prices and reap very handsome profits, especially if they were able to get extra rations of raw materials.

In many ways the rationing procedures in textile production set an early precedent, which was then followed in other industries. The rationing of iron and steel was organized in a comparable way. Military orders, exports, and certain other categories of demand for iron and steel were given privileged status, but there also was a quota left for general purposes.²⁵ Therefore, enterprises manufacturing iron and steel products could, to a large extent, maintain control over their precise production plans and then apply for the necessary amounts of iron and steel. Thus in a recent dissertation on machinery firms in Chemnitz during the Nazi era, it is concluded with regard to the prewar period: "Even if price control, shortage of raw materials and slowly declining freedom to dispose of workers—the latter becoming fully effective only during the war—restricted entrepreneurial autonomy: In its principal strategic decisions the management still was autonomous." That is proven by the actual production, which was in large part not geared to the regime's priority of rearmament, even after the middle of the thirties.²⁶ It is clear, therefore, that under the Four Year Plan of 1936 the state did not use iron and steel allocation as an obvious and potent means to strictly plan the composition of industrial production.²⁷ Contrary to an explicit statement by Temin, the state could not use its exclusive access to the capital market for this purpose either.²⁸ Industrial enterprises normally generated enough financial means through large profits and high depreciation earned that they could finance their genuine needs without re-

²⁴ Peter, *Rüstungspolitik in Baden*, pp. 217–70.

²⁵ Geer, *Markt der geschlossenen Nachfrage*, p. 44.

²⁶ Schneider, *Unternehmensstrategien*, pp. 79–159; compare Schneider, "Business Decision Making."

²⁷ That, however, is maintained by Temin ("Economic Planning," p. 576).

²⁸ Ibid.

sorting to the capital market.²⁹ Despite the encompassing organization created to execute it, the Four Year Plan, therefore, was not at all comparable to Soviet Five Year Plans. Its ambition mainly was to rapidly increase the output of a few basic products by import substitution in order to reduce the dependence of the Third Reich on imports of strategic importance.³⁰ Even in doing that the state largely abstained, as we will see, from the use of force.

A corollary of the still great autonomy of industry with regard to its production plans and another difference to a centrally planned economy was that enterprises normally continued to select their customers themselves. An obligation to serve a specific demand hardly existed for the majority of firms. That also applied to orders from state agencies. Firms could, in principle, refuse to accept them. One of the rare exceptions to that rule occurred in late summer 1937 when the iron and steel industry was obliged to accept orders from the military and other privileged customers. This step, however, was qualified even by Hermann Göring as a "very strong" measure and after two months it was to be lifted automatically.³¹ Even in November 1941 Ernst Poensgen, director of the iron and steel industry group, still could frankly explain to the plenipotentiary for iron and steel rationing General Hermann von Hanneken that the members of his group were not prepared to accept further military orders; instead they wanted to serve orders from exporting companies, shipbuilding, and the *Reichsbahn*.³² Only in 1943 was an obligation to supply certain requirements reintroduced under the utmost exigencies of total war.

Investment Decisions

Regulation of raw material consumption in industry not unexpectedly had an effect on investment. If we again take the example of textiles it can be observed that after 1936 much of the new investment in this industry served to adapt plants to the processing of big quantities of artificial fibers. Further investment was necessary to enable firms to produce special products, which commanded privileged access to raw materials.

²⁹ Spoerer, *Scheingewinne*.

³⁰ This was demonstrated already by Petzina, *Autarkiepolitik*.

³¹ Thyssen-Krupp-Archives Duisburg FWH/1512, Telex Scheer-Hennings to Poensgen about conversation with Göring, 26 June 1937; for all information on iron and steel rationing we thank Ulrich Hensler, University of Mannheim, who is currently writing a dissertation about the subject. Mannesmann-Archives Mülheim M 80.200, Anordnung über die Annahme und Auslieferung der Ausfuhr-, Wehrmachts- und Vierjahresplan-Aufträge für die Monate August und September 1937, 9 July 1937.

³² Müller, "Mobilisierung der deutschen Wirtschaft," p. 610; see also Müller, *Manager der Kriegswirtschaft*, pp. 136–37.

On the other hand, after the introduction of iron and steel rationing, it became increasingly difficult for textile companies to get the amounts of iron necessary for their investment projects. After 1934 there also existed a general prohibition of capacity enlargement in the textile industry, which, however, principally did not apply to modernization and rationalization. In addition, exceptions from the ban on capacity enlargement could be and were agreed to by the authorities. Together that bundle of incentives and disincentives for investment activities in the textile industry led, perhaps surprisingly, to a growth of investment, which between 1936 and 1938 was almost comparable to that of industry as a whole.³³ And, what in our context is more important, state intervention in investment plans of firms was restricted to legally prescribed licensing in some cases and, later on, to the allocation of the necessary amounts of iron. But the initiative for self-financed investment projects normally had to come from the enterprises and not from any state planning agency.

It is characteristic of the prevailing situation that already in the thirties purely private investment in industry was, despite high profits, rather low. The reason, then, was not so much regulation or lack of materials but, as many contemporary observers noted, a critical assessment of economic policy geared to rearmament that “prevent[ed] businessmen from investing money in new plant.” Instead of undertaking new investment projects, existing capacity was overutilized to the extent that per unit production costs sometimes even increased again. In addition, firms used much of their liquidity to reduce debts or to finance mergers.³⁴ A case in point was the steel industry, which resisted the temptation to greatly enlarge its capacities—an action the regime would have appreciated. In consequence shortages of steel, a product that was absolutely essential for rearmament, quickly developed, resulting in the introduction of rationing as early as 1937. There was no lack of financial means in the steel industry. For example, between autumn of 1932 and mid-1938 Krupp’s retained earnings (including depreciation) amounted to 251 million RM. But during the same period Krupp only spent 45 million RM for capacity enlargements; for financial investments in other companies it disbursed 30 million, and it accumulated as much as 58 million in liquid form.³⁵ The management did not wish to concentrate exclusively on rearmament. In fact Krupp kept producing a broad

³³ Höschle, *Textilindustrie*.

³⁴ Bresciani Turroni, “‘Multiplier’,” pp. 80–81. For this fact, also see Buchheim, “Wirtschaftsentwicklung im Dritten Reich,” pp. 658–59, and “Upswing,” pp. 48–50.

³⁵ Krupp-Archives, Essen, WA IV 2876, Matters of Finance; the rest of the funds were used to finance replacement of worn-out fixed capital and additions to stocks and other short-term assets.

assortment of civilian goods even during the war.³⁶ In that it was no exception. A report on the industry commissioned by the armaments ministry in 1943 concluded that the steel firms still manufactured a whole range of products for peacetime purposes.³⁷

Obviously, long-term profit expectations still played an important role in determining the way firms used their own financial means. They were keen to avoid overcapacity in case the armaments boom should vanish and, therefore, hesitated to construct new capacity that would have the sole purpose of serving that boom. Not unexpectedly, firms acted very similarly with regard to import substitution projects, which the regime considered necessary in order to further autarky. An interesting case in this respect is the "National Fibre Programme" of 1934 for a huge expansion of the domestic output of artificial fiber.³⁸ The established producing companies, namely IG Farben and Vereinigte Glanzstoff-Fabriken (VGF), indeed saw an increasing potential for the sale of artificial fiber, even if unrestricted competition with natural fibers were eventually restored. Thus, they were willing to enlarge their respective capacities to a certain extent, but not by so much as the regime was planning. Threatening them with the erection of competing state-subsidized factories did not lead to a change of mind on their part. Consequently such new enterprises were indeed created, and some of them became competitive towards the end of the thirties. IG Farben and VGF reacted by ceasing to add capacity themselves and concentrating on research-intensive high-value artificial fibers, in which they had a comparative advantage and which were viewed as the most promising varieties for the future.³⁹ Therefore, even though the "National Fibre Programme" targeted a new industry with a profitable future in a highly developed country as did other autarky projects of the Nazi period, it is also clear that this was by mere coincidence.⁴⁰ For the official plans were deemed overambitious and thus unprofitable in the end by the important companies in the field. Given the recognition of its potential within these firms, the output of artificial fiber would have risen in any case. But the most interesting aspect in our context is that the established enterprises again invested their money according to their *own* assessment of the future profitability, this time with regard to an autarky project, and could not be persuaded by the regime to do more.

³⁶ Abelshauser, "Rüstungsschmiede der Nation?," pp. 328–39.

³⁷ Müller, *Manager der Kriegswirtschaft*, p. 136.

³⁸ For the following compare Scherner, "Zwischen Staat und Markt".

³⁹ Rheinisch-Westfälisches Wirtschaftsarchiv Köln [RWWA] 195/K 14-2, Supply of Europe with Artificial Fibre, 10 April 1941.

⁴⁰ Ritschl, "Die NS-Wirtschaftsideologie," pp. 48–70.

The latter conclusion seems to be true for industry as a whole. Therefore Adam Tooze is right when stating in a recent article: "Even in 1944 it proved to be impossible to effectively direct private investment," which in his eyes also explains the uneconomically large sales of machine tools between 1938 and 1944 in Germany.⁴¹ The nominal power of the Reich's Economics Ministry to prohibit all investment in specific industries is no proof to the contrary. This was enacted in 1933 as one provision of the law on forced cartelization. The aim was to prevent construction of new capacity for which there was no real need, a tendency that often occurs in cartels.⁴² Although not restricted to cartels, forced or otherwise, the provision was applied only in a few cases. Sometimes the provision's application was requested by the specific industry itself. Exceptions from a ban were always possible. In some instances it appears to have been used as a device to protect branches dominated by small and medium-sized enterprises from ruinous competition, in others no real restriction, only information about investment behavior was intended.⁴³

Of course small and medium-sized enterprises were exactly those that, during the war, came under mounting pressure to close down and release their labor and other resources for more efficient use in larger firms heavily engaged in armaments production. The most severe threat in this respect stemmed from a decree of January 1943. However, the resistance to such actions was great, and consequently closures proceeded more slowly than planned. The decree itself clearly was an emergency measure of total warfare and therefore cannot be taken as evidence for an inclination of the regime towards socialism and central planning. In fact the reopening of firms closed after the war was guaranteed.⁴⁴

Freedom of Contract

A great percentage of all industrial investment during the Third Reich was not primarily in the interest of industry itself. Rather it was necessary to realize the regime's military aims. Therefore industries important for the production of armaments as well as of those goods which could substitute for strategic imports grew very fast. As early as 1938, for instance, almost a quarter of the total labor force in industry was directly employed in the production of armaments according to

⁴¹ Tooze, "'Punktuelle Modernisierung,'" pp. 79–98.

⁴² Reichsgesetzblatt 1933 I, p. 488.

⁴³ Lurie, *Private Investment*, pp. 200–09.

⁴⁴ Herbst, *Totaler Krieg*, pp. 207–31.

Wehrmacht design.⁴⁵ Thus, the question arises, how the state made sure that such war-related investment projects were undertaken. We have already seen that it did not always use force to make enterprises conform to its investment plans. Was such behavior on the part of the regime the exception or was it the rule? If it was the rule, what instruments did the regime employ for the purpose?

A famous example where enterprises were simply forced to undertake an investment was the *Braunkohle-Benzin AG (BRABAG)*.⁴⁶ In order to finance the plants of this firm manufacturing fuel from domestic raw materials, the biggest German producers of lignite were obliged against their will to make available the necessary funds in the form of a quasi-loan over a ten-year period.⁴⁷ Incidentally, there is a case where a similar procedure was selected in West Germany: The “Investment Aid Law” of 1952 resulted in a forced loan to supply the capital needs of basic industry.⁴⁸ In the Third Reich there probably were some more cases of this or a similar kind. However, on the whole they remained exceptions indeed. Neither in West Germany nor in the Third Reich can they be seen as a proof of the proposition that enterprises were permanently laboring under the threat of being subjected to force or even nationalized if they did not comply with the wishes of the regime. It rather has to be stated that companies normally could refuse to engage in an investment project designed by the state—without any consequences. Besides those already mentioned there can be cited quite a few additional instances where they did so, even after the implementation of the Four Year Plan and after the beginning of war, both being sometimes considered as watersheds in the economic policy of the regime.⁴⁹ In fact, the rhetoric may have become more aggressive after 1936. But the actual behavior of the Nazi state in relations with private enterprises appears to have not changed, because firms continued to act without indication of fear that they could be nationalized or otherwise put under unbearable pressure.

Thus, *de Wendel*, a coal mining enterprise, refused to build a hydrogenation plant in 1937.⁵⁰ In spring 1939 *IG Farben* declined a request by the Economics Ministry to enlarge its production of rayon for the use

⁴⁵ Petzina, “Vierjahresplan und Rüstungspolitik,” p. 73.

⁴⁶ Birkenfeld, *Synthetischer Treibstoff*, pp. 37–38; and Hayes, *Industry*, pp. 133–35.

⁴⁷ Bundesarchiv [BArch] R 3101/18353/9, Note on a conversation in the Economics Ministry with representatives of BRABAG, 11 April 1938.

⁴⁸ Adamsen, *Investitionshilfe*.

⁴⁹ Mollin, *Montankonzerne*, p. 257; Overy, *Nazi Economic Recovery*, p. 56; and Hayes, *Industry*, pp. 165–73, and *Degussa*, chapter 4.

⁵⁰ BArch R 3101/18220, Amt für deutsche Roh- und Werkstoffe to Wirtschaftsgruppe Mineralölindustrie, 27 April 1937.

in tires.⁵¹ It also was not prepared to invest a substantial amount in a third *Buna* (synthetic rubber) factory in Fürstenberg/Oder, although this was a project of high urgency for the regime.⁵² Another interesting example is the one of *Froriep GmbH*, a firm producing machines for the armaments and autarky-related industries, which also found a ready market abroad. In the second half of the 1930s the demand for the former purposes was so high that exports threatened to be totally crowded out. Therefore the company planned a capacity enlargement, but asked the Reich to share the risk by giving a subsidized credit and permitting exceptional depreciation to reduce its tax load. When the latter demand was not accepted at first, the firm reacted by refusing to invest. In the end the state fully surrendered to the requests of the firm.⁵³

To conclude this list of examples a last case seems worth mentioning—the *Oberschlesische Hydrierwerke AG Blechhammer*. This hydrogenation plant was one of the largest investment projects undertaken in the whole period of the Third Reich; between 1940 and autumn 1943 it cost 485m RM.⁵⁴ The plan was to finance it with the help of the Upper Silesian coal syndicate. However, the biggest single company of the syndicate, the *Gräflich Schaffgott'sche Werke GmbH*, repeatedly refused to participate in the effort. Other companies were prepared to finance a part of the plant, but only under conditions that were unacceptable to the Reich because they would have implied discrimination against firms that had already concluded other contracts with the state. For some time Carl Krauch, plenipotentiary for chemicals production, contemplated an obligatory engagement of firms. There existed, however, rather different opinions among state agencies concerning this question. And finally, in November 1939, the hydrogenation factory was founded without any participation of private industry.⁵⁵

All the cases described, which could still be augmented, show that freedom of contract generally was respected by the regime even in projects important for the war. Therefore it is apt to state that short- and

⁵¹ RWWA 195/B 6-28-146, Hermann note about telephone call of 9 April 1939 with Gajewski from IG Farben.

⁵² BArch R 3101/18453, Amt für deutsche Roh- und Werkstoffe, various notes. See Stokes, "Von der I.G. Farbenindustrie AG bis zur Neugründung der BASF," p. 302, who also notes that the resistance of the company against the proposals of the government finally was successful.

⁵³ BArch R 3101/18071, Various letters from Froriep as well as from the Four Year Plan Authority.

⁵⁴ BArch R 3101/18220, List of hydrogenation plants. The sum mentioned impressively compares to a total investment of 706m RM of Daimler-Benz during the whole Nazi period; Gregor, *Daimler-Benz*, pp. 39, 84.

⁵⁵ BArch R 3101/18250, R 3101/18251, R3101/18253, Various notes and letters, notarial document. Interestingly Birkenfeld wrongly writes that force was applied in that case without giving a proof of this contention, however; Birkenfeld, *Synthetischer Treibstoff*, p. 139.

long-term profit expectations of firms played a decisive role in the armaments and autarky-related sectors, too. Private property rights and entrepreneurial autonomy were not abolished during the Third Reich even in these sectors. That being the case the regime had to devise instruments to *induce* firms to meet the state's military needs. Very often that could be done only by shifting the financial risk connected to an investment at least partly to the Reich. For this purpose the regime offered firms a number of contract options to choose from implying different degrees of risk-taking by the state. For example, in a kind of leasing arrangement the state itself could become the owner of a plant, which was then operated by a private enterprise in exchange for a secure profit.⁵⁶ That was the one extreme option where the state paid total costs and bore the whole risk. The other extreme option, of course, was an enterprise realizing a war-related investment with no state aid at all except perhaps the permission to turn to the capital market for the necessary financial means. In between lay contracts that included a state subsidy and contracts guaranteeing sales for a fixed minimum price (*Wirtschaftlichkeitsgarantievertrag*).⁵⁷

In the leasing contract mentioned, the state was the owner and the private firm only the operator of a factory. This form was chosen, if short- and long-term expectations of the enterprise concerning the project were negative, as was the case for the stand-by armaments plants, many of them being integrated in a state holding company, the *Verwertungsgesellschaft für Montanindustrie mbH (Montan GmbH)*.⁵⁸ A similar arrangement was applied to the exploitation of the very poor German copper mines, which was impossible to do in a competitive way.⁵⁹ If profit expectations by firms were negative in the short run but positive in the long run, a *Wirtschaftlichkeitsgarantievertrag* was normally opted for. These contracts were available for a period of up to ten years, the fixed minimum price being calculated to include relevant costs including depreciation and a certain profit margin. The plants built under such an arrangement were the property of the firm, but the state reserved to itself extensive control rights during the contract period. Furthermore the contract could not be terminated earlier by unilateral decision of the enterprise. A *Wirtschaftlichkeitsgarantievertrag* was typically chosen by companies in the case of hydrogenation projects.⁶⁰ The reason was that under certain circumstances one could reckon with

⁵⁶ For examples see Hopmann, *Montan*.

⁵⁷ Lurie, *Private Investment*, pp. 185–89.

⁵⁸ Hopmann, *Montan*, pp. 119–20.

⁵⁹ BArch R 3101/30383, Mansfeld-Contract of 15 May 1939. See also Scherner, "Ohne Rücksicht auf die Kosten?"

⁶⁰ For instance Benzin-Contract of 14 December 1933 (BASF-Archives Ludwigshafen, IG-Files, B 4/760); Ruhrchemie-Contract of 31 July 1934 (BArch R 3101/18361).

synthetic fuel becoming internationally competitive.⁶¹ However, if that had not materialized after the end of the contract period, plants designed for the hydrogenation of coal could be switched with little cost to the hydrogenation of mineral oil residues from the cracking process. That appreciably augmented the fuel yield from a given quantity of raw oil, a procedure employed in the United States since the beginning of the thirties.⁶² Therefore such plants carried with them positive expectations in the long run, i.e. after the termination of guaranteed sales. And that in turn made it valuable to the enterprises to own them.

When the Reich was asked by a firm to just subsidize an investment project it was interested in, for example by guaranteeing necessary credits, there existed positive profit expectations already in the short run even under potentially competitive conditions.⁶³ Therefore, enterprises wanted to have the option to get out of the contract whenever they chose, possibly paying back the guaranteed credits. Characteristically, in 1937 *IG Farben* concluded a *Wirtschaftlichkeitsgarantievertrag* for its first plant to produce *Buna*.⁶⁴ For the second one of 1939, however, it only demanded a state subsidy, because in the meantime short-term expectations for the sale of the product, for which the firm had a national monopoly, had become positive through higher productivity achieved by additional innovations and cost reductions.⁶⁵ For the third plant with a further improved technology, which was finally constructed in Ludwigshafen in 1940/41, the *IG* did not negotiate a direct subsidy at all, thus avoiding any right of a state agency to control the operations of the factory. There could have been no bigger contrast to the American firms producing synthetic rubber during the war. For even their long-term expectations concerning the profitability of the product remained negative. That explains why in the U.S. synthetic rubber continued to be manufactured in a framework comparable to the leasing arrangements mentioned above—leading to much lower efficiency growth than in Germany.⁶⁶ Incidentally, this also shows that the instruments used to induce private industry to undertake war-related productions and investments could be very similar on both sides of the front. That in turn can be viewed as a piece of indirect evidence for the fact that the economies

⁶¹ See for example Becker, *Mineralölwirtschaft*, p. 149; BArch R 2301/6580, Translation of a Financial Times article (30 September 1937); Hayes, *Industry*, p. 143.

⁶² BASF-Archives, M 42, Speech by M. Pier of 24 August 1933; von Nagel, *Methanol*.

⁶³ See for instance Scherner, “Zwischen Staat und Markt.”

⁶⁴ BArch R 3101/18447, *Buna-I-Contract* of 16 August 1937.

⁶⁵ BArch R 3101/18448, Memorandum of *IG* on the construction and financing of the three *Buna*-factories, 8 January 1940; BArch R 3101/18446, Ministry of Economics, note of 14 April 1939.

⁶⁶ Streb, *Staatliche Technologiepolitik*, pp. 110–22.

of Germany and the Western Allies still were quite similar, as they all were basically capitalist.

The foregoing analysis again proves that in the Nazi period enterprises continued to shape their actions according to their expectations and that the state authorities not only tolerated this behavior, but bowed to it by adapting their contract offers to the wishes of industry. That is also confirmed by Tooze, who argues that there was no “Stalinist option” available to the Nazi regime and consequently “a mixture of incentives provided by the state with private economic motives” was decisive for the development of certain sectors of production.⁶⁷ Further examples of this are provided by the negotiations of the shipbuilder *Blohm & Voss* with the navy about the construction of a huge dock in 1937 as well as the conditions for the enlargement of the *Krupp* Essen plant requested by the company and fulfilled by the Reich.⁶⁸ The behavior of enterprises in all these cases also demonstrated that they foresaw the eventual reduction of interventionism and state demand, which would lead to the reemergence of a market economy and to greater foreign competition. If it had been otherwise, the forming of long-term expectations different from short-term expectations would have been meaningless. Thus, industry itself did not consider the development of the Nazi economic system as heading towards central planning and socialism. Rather, the very important role of the state in the prewar and war economy was seen as related to warfare—and thus temporary. Although there was no guarantee that a postwar German economy would return to a more market-like framework—in fact, in a dictatorship such as that of the Nazi regime no such guarantee could be really credible—the daily experience of entrepreneurs and managers in their dealings with the bureaucracy of the Nazi state obviously led them to that conviction. Therefore they acted accordingly and by doing so found this conviction again and again confirmed. For the regime generally tolerated their behavior inspired as it was by their regard for the long-term profitability of their businesses.

MOTIVES OF THE NAZIS

The foregoing discussion is clearly corroborated by an analysis of Nazi intentions. Available sources make perfectly clear that the Nazi regime did not want at all a German economy with public ownership of many or all enterprises. Therefore it generally had no intention whatso-

⁶⁷ Tooze, “‘Punktuelle Modernisierung’,” p. 98.

⁶⁸ Meyhoff, *Blohm & Voss*, pp. 178–81. Abelshauser, “Rüstungsschmiede der Nation?,” pp. 338–40.

ever of nationalizing private firms or creating state firms. On the contrary the reprivatization of enterprises was furthered wherever possible. In the prewar period that was the case, for example, with the big German banks, which had to be saved during the banking crisis of 1931 by the injection of large sums of public funds. In 1936/37 the capital of the *Deutsche Bank*, *Commerzbank* and *Dresdner Bank* in the possession of the German Reich was resold to private shareholders, and consequently the state representatives withdrew from the boards of these banks.⁶⁹ Also in 1936 the Reich sold its shares of *Vereinigte Stahlwerke*.⁷⁰ The war did not change anything with regard to this attitude. In 1940 the *Genshagen* airplane engine plant operated by *Daimler-Benz* was privatized; *Daimler-Benz* bought the majority of shares held by the Reich earlier than it wished to. But the company was urged by the Reich Aviation Ministry and was afraid that the Reich might offer the deal to another firm.⁷¹ Later in the war the Reich actively tried to privatize as many *Montan GmbH* companies as possible, but with little success.⁷²

State-owned plants were to be avoided wherever possible. Nevertheless, sometimes they were necessary when private industry was not prepared to realize a war-related investment on its own. In these cases, the Reich often insisted on the inclusion in the contract of an option clause according to which the private firm operating the plant was entitled to purchase it.⁷³ Even the establishment of *Reichswerke Hermann Göring* in 1937 is no contradiction to the rule that the Reich principally did not want public ownership of enterprises. The Reich in fact tried hard to win the German industry over to engage in the project. However, most iron and steel companies were not interested in working the poor German iron ores, a big part of which lay in great depth, especially because cheaper ore with a much higher iron content could be had on international markets.⁷⁴ Finally, Göring pushed forward with the creation of a public enterprise against continuing resistance of the Finance Ministry.⁷⁵ As it soon appeared, the project was a very expensive and ineffi-

⁶⁹ Kopper, *Zwischen Marktwirtschaft und Dirigismus*, pp. 201–08.

⁷⁰ Mollin, *Montankonzerne*, pp. 52–53.

⁷¹ Gregor, *Daimler-Benz*, pp. 110–11; see also Budraß, *Flugzeugindustrie*, p. 494, where it is stated that at the end of 1941 almost the whole equity capital of the airplane industry in possession of the Reich from before 1938 had been reprivatized.

⁷² Hopmann, *Montan*, pp. 131–34. But see Lorentz, *Industrieelite und Wirtschaftspolitik*, pp. 215–19, for one of the few actual privatizations of a *Montan* company.

⁷³ For instance the contract between the Reich and the Gerhard Fieseler Company, Kassel, of 9/14 September 1939; BArch R 2/5478; Hopmann, *Montan*, p. 123.

⁷⁴ BArch R 2/19553, Reich Finance Ministry, Note on *Reichswerke Hermann Göring*, 14 July 1937; compare Mollin, *Montankonzerne*, pp. 70–75.

⁷⁵ BArch R 2/21586, Schwerin von Krosigk to Göring, 3 September 1937.

cient one.⁷⁶ Therefore it seems plausible to consider this experience to have strengthened the resistance of the Reich bureaucracy to future engagements of a similar kind. In any case the principle of the Four Year Plan that its projects preferably had to be executed by private industry was quite often confirmed later on, and it was explicitly stated that more *Reichswerke* (companies owned and operated by the Reich) were not desirable.⁷⁷ During the war even Hermann Göring repeatedly said that he had always aimed to restrict financial engagements of the Reich in industrial enterprises as far as possible.⁷⁸ Consequently, in 1942 he gave his consent to reprivatize quite a few armaments-producing firms that belonged to the *Reichswerke Hermann Göring* group.⁷⁹

There are several causes for the Nazi policy with regard to public ownership of companies just described. Paragraph 48 of the law on the Reich's budget (*Reichshaushaltsordnung* [RHO]) together with paragraph 60 of the regulations concerning the financial and economic behavior of the Reich (*Wirtschaftsbestimmungen für die Reichsbehörden* [RWB]) permitted entrepreneurial engagement of the Reich only when important interests of the Reich were not attainable otherwise and only with the consent of the Reich Finance Minister. These decrees, originating in the Weimar Republic, were never repealed during the Third Reich and thus placed the more liberally minded bureaucracy of the Reich Ministry of Finance in a strong position. It insisted that all institutions of the Reich had to strictly apply those regulations. Otherwise it would not agree to any such industrial engagement of the Reich with the result that it would be unlawful.⁸⁰ In that respect even Reich Marshal Hermann Göring had to bow to the Reich Finance Ministry. Thus it is characteristic that the Finance Ministry could decline a request from October 1944 of the Reich Aviation Ministry, the head of which was

⁷⁶ Mollin, *Montankonzerne*, pp. 138–41; Bopp, "Evolution of the Pricing Policy," pp. 153–55.

⁷⁷ BArch R 3101/18453, Amt für deutsche Roh- und Werkstoffe, Note on a discussion with representatives of the Reich Finance Ministry, 28 January 1938; R 3112/169, Speech about the execution of the Four Year Plan, c. 1938/39 (probably given by Krauch). BArch R 3101/18453, Amt für deutsche Roh- und Werkstoffe, Note on negotiations with IG about Buna III, 5 February 1938.

⁷⁸ BArch R 2/15160a, Instruction of Göring, 23 March 1942; BArch R 2/5551, Göring to Reich Finance Ministry, 24 July 1942; compare also ibid., Reich Aviation Ministry to Reich Finance Ministry, 18 February 1943. See Müller, "Albert Speer und die Rüstungspolitik im totalen Krieg," p. 323, where Göring is quoted with an explicit appreciation of the advantages reaped by letting things be done through private industry.

⁷⁹ BArch R 2/15160a, Instruction of Göring, 23 March 1942; see also R 61/496, Conference of Sub-group on Money and Credit of Class IV, Akademie für Deutsches Recht, 28/29 November 1942; compare Mollin, *Montankonzerne*, pp. 52–53.

⁸⁰ BArch R 2/21586, Reich Finance Ministry, November 1938, regarding Hermann Göring-Werke: Consent of the Reich Finance Ministry according to § 48,4 RHO; Wawerla / Ambrosius, *Haushaltrecht*, pp. 254–55. According to Art. 123,1 of the Basic Law the RHO and RWB continued to be law in the Federal Republic.

Göring, to increase a guarantee of credits given by the *Bank der Deutschen Luftfahrt* to the airplane industry as share capital.⁸¹ The power of the Reich Finance Ministry basically derived from its preserved formal responsibility for the Reich budget—a relic from the Weimar democracy. That in turn was a consequence of the fact that the Nazi takeover of 1933 was not a revolution in the proper sense of the word. The National Socialist Party just established some new nonstate executive agencies *besides* the old state institutions.⁸² Of course, every Weimar law and every traditional state institution could have been brushed aside by the Nazi regime. But as long as that was not done they functioned in their normal way. Thus the following two reasons might explain why the old order of things was not changed in this case.

First, one has to keep in mind that Nazi ideology held entrepreneurship in high regard. Private property was considered a precondition to developing the creativity of members of the German race in the best interest of the people. Therefore, it is not astonishing that Otto Ohlendorf, an enthusiastic National Socialist and high-ranking SS officer, who since November 1943 held a top position in the Reich Economics Ministry, did not like Speer's system of industrial production at all. He strongly criticized the cartel-like organization of the war economy where groups of interested private parties exercised state power to the detriment of the small and medium entrepreneur. For the postwar period he therefore advocated a clear separation of the state from private enterprises with the former establishing a general framework for the activity of the latter.⁸³ In his opinion it was the constant aim of National Socialist economic policy, “to restrict as little as possible the creative activities of the individual. . . . Private property is the natural precondition to the development of personality. Only private property is able to further the continuous attachment to a certain work.”⁸⁴

A second cause has to do with the conviction even in the highest ranks of the Nazi elite that private property itself provided important incentives to achieve greater cost consciousness, efficiency gains, and technical progress. The principle that Four Year Plan projects were to be executed as far as possible by private industry was explicitly motivated in the following way: “It is important to maintain the free initia-

⁸¹ BArch R 2/5551, Reich Aviation Ministry to Reich Finance Ministry, 16 October 1944. The request was made a second time in January 1945; see *ibid.*, Reich Aviation Ministry to Reich Finance Ministry, 26 January 1945.

⁸² See Fraenkel, *Dual State*.

⁸³ BArch R 3101/32.016, Speech of Ohlendorf to the Reichsgruppe Industrie, 4 July 1944; see also Herbst, *Totaler Krieg*, pp. 79, 448–52.

⁸⁴ BArch R 3101/32.149, Principles of economic policy (not dated).

tive of industry. Only in that case can one expect to be successful.”⁸⁵ Some time earlier a similar consideration was expressed: “Private companies, which are in charge of the plants to be constructed, should to a large extent invest their own means in order to secure a responsible management.”⁸⁶ During the war Göring said it always was his aim to let private firms finance the aviation industry so that private initiative would be strengthened.⁸⁷ Even Adolf Hitler frequently made clear his opposition in principle to any bureaucratic managing of the economy, because that, by preventing the natural selection process, would “give a guarantee to the preservation of the weakest average [sic] and represent a burden to the higher ability, industry and value, thus being a cost to the general welfare.”⁸⁸

Interestingly enough this second cause conforms well to modern economic reasoning about the effects of private versus public ownership.⁸⁹ In this context a very important suggestion is that the question of ownership of firms has to be strictly distinguished from the competitive or noncompetitive framework they are working in. Public ownership often negates the efficiency-enhancing properties of competitive markets because of political interference and the weak incentives of managing bureaucrats. But it is also the case that private ownership of firms is advantageous even if producing for state demand in monopoly situations. The reason is that residual control rights remain with the private owner. In the normal case of incomplete contracting, the owner thus can legally engage in actions that increase efficiency without asking the government. And he will have an incentive to do so, because that will augment his profits. The *Wirtschaftlichkeitsgarantievertrag* was exactly such a contract with an obligation for the enterprise to produce a specified product while guaranteeing minimum sales for a certain price, but leaving residual control rights to the firm. As has been shown, IG Farben, monopoly producer of synthetic rubber, achieved high efficiency gains in a framework of this kind with the result that for the second and third Buna factories it did without such a contract, in order to increase its freedom of action even more. On the other hand, the Reichswerke Hermann Göring offer a good example of the deleterious effects of pub-

⁸⁵ BArch R 3112/169, Speech of Carl Krauch (?) about the execution of the Four Year Plan, c. 1938/39.

⁸⁶ BArch R 3101/17789, Amt für deutsche Roh- und Werkstoffe, Financing proposal for the plan, 1937 (?).

⁸⁷ BArch R 2/5551, Göring to Reich Finance Ministry, 24 July 1942.

⁸⁸ Quoted from Herbst, *Totaler Krieg*, p. 80; see also Ritschl, “Verhältnis von Markt und Staat”.

⁸⁹ Hart et al., “Proper Scope,” pp. 1127–61; Shliefer, “State versus Private Ownership”; and Shirley and Walsh, *Public versus Private Ownership*.

lic ownership, exhibiting high inefficiency because of practically unlimited subsidization as well as openness to corruption.⁹⁰

It is also clear that high-ranking Nazis and state officials made no secret of their esteem for entrepreneurial abilities and the productivity-enhancing qualities of private property. Rather, they expressed these opinions frankly in public as well as in internal conversations with industrialists. Therefore the assumption appears to be justified that this, if anything, strengthened the expectation of the latter regarding the state's postwar retreat from its interventionist attitude.

CHARACTERIZING THE NAZI ECONOMIC SYSTEM

By keeping intact the substance of private firm ownership the Nazis thus achieved efficiency gains in their war-related economy, at least on the firm level. And, perhaps surprisingly, they were aware of this relationship and made consciously use of it to further their aims. Thus "planning" had indeed a very different meaning in the Nazi state from that in the Soviet Union. It is therefore not at all astonishing that this was often emphasized by contemporaries in many quarters.⁹¹ It is ironic, however, that the actual "planning" done by state agencies in the Nazi economy was rather chaotic and contradictory, a fact that has been established in the literature quite well.⁹² Recent research even casts some doubt on the traditional assumption that much changed in this respect under the Speer Ministry. Rather, a big part of the so-called armaments miracle from 1942 onwards probably was due to more resources being devoted to armaments production as well as to learning effects.⁹³ Seen from that perspective the following hypothesis may rightly be formulated: Under the Nazi regime private firm property was consciously pre-

⁹⁰ A foreign example has been the production of synthetic fuel by a state-owned company in Spain (Román and Sudrià, "Synthetic Fuels"). The harder budget constraint a private firm is confronted with indeed is a further important reason for its greater productive efficiency; see Schmidt, "Costs and Benefits."

⁹¹ For instance BArch R 3101/32.149, *The economy as an element of the National Socialist life of the German People* (by Ohlendorf, probably 1936/37); that also was made clear in textbooks about the (legal) relationship of state and economy; compare Häberlein, *Verhältnis von Staat und Wirtschaft*, with paragraphs on "Führungs- oder Lenkungswirtschaft, nicht Planwirtschaft" or "Über die Gestaltung und Auswirkung des deutschen Sozialismus im Wirtschaftsleben"; Hedemann, *Deutsches Wirtschaftsrecht*, pp. 41–45, 157–59. Compare also economics textbooks of the period; see Hesse, "Semantik."

⁹² See for example Overy, *Why the Allies Won*, pp. 200–05, where, surprisingly, it is stated that "Germany was not the Soviet Union, centrally planned and centrally commanded," one of the differences being that there "was a business community most of whom remained wedded to entrepreneurial independence," which obviously contradicts Overy's earlier work (see notes 10 and 11). Recently it has been shown that the Nazi policy concerning the supply of mineral oil, either natural or synthetic, was very contradictory, too; compare Kockel, *Deutsche Ölpolitik*.

⁹³ Budraß et al., "Demystifying the German 'Armament Miracle'."

served as a meaningful device, not least in order to make the German war economy more efficient. Although that was achieved on the level of the single private (as compared to socialized) business, potential positive effects on the German economy as a whole were missing to a large extent because the regime, caught in its polycratic structure and prone to lobbying by individual business groups, proved unable to organize its demands on industry in a less confusing, more rational way.

Irrespective of a quite bad overall performance, an important characteristic of the economy of the Third Reich, and a big difference from a centrally planned one, was the role private ownership of firms was playing—in practice as well as in theory. The ideal Nazi economy would liberate the creativeness of a multitude of private entrepreneurs in a predominantly competitive framework gently directed by the state to achieve the highest welfare of the Germanic people. But this “directed market economy,” as it was called, had not yet been introduced because of the war. Therefore, a way to characterize the actual German economy of the Third Reich more realistically would probably be “state-directed private ownership economy” instead of using the term “market.” But that means neither that the specific measures taken by the state were really helpful in the war effort, nor that “markets” played no role in the actions of enterprises. The expectation of the eventual re-establishment of markets as decisive institutions for the governance of business did shape the behavior of firms during the time when markets’ actual importance was much diminished.⁹⁴ The relationship between state and industry in the Nazi period can therefore be best interpreted as a temporary partnership where the state was the principal and the industry the agent. However, the agent not only, as always, had a very close eye on its own interests, but actively prepared for being the principal itself in the future. In the meantime, of course, industry adapted to the regime’s sometimes irrational wishes, often at little financial costs, but by deferring development plans of its own. It is obvious therefore that there existed, in the words of Hayes, opportunity costs to enterprises.⁹⁵

That is clearly indicated by the composition of industrial investment. For instance, only about 40 percent of industrial investment in 1938 was “private” in the sense that it was not directed by the state towards ar-

⁹⁴ That is not seen in an otherwise quite interesting contribution recently published by Werner Plumpe (Plumpe, “Unternehmen im Nationalsozialismus”). For Plumpe explicitly states that in the course of time decision-making of firms was less and less influenced by observation of markets and that its place was taken by the demands of politics transformed into sales and price guarantees.

⁹⁵ Hayes, *Degussa*, p. 197.

maments and autarky-related products.⁹⁶ Although profitability of companies in 1938 was four times higher than in 1928, “private” investment of industry at most reached two-thirds of the level of 1928.⁹⁷ On the one hand, this shows that, even after the inauguration of the Four Year Plan and the establishment of iron and steel rationing, it still was possible for firms to invest according to their genuine plans, which can be considered an expression of their continuing entrepreneurial autonomy. On the other hand, “private” investment was rather low seen against the background of very high profitability. This was due, at least partly, to the fact that entrepreneurs reckoned with the eventual collapse of the armament boom, potentially leading to high overcapacities, which they wanted to avoid under all circumstances.

Finally, one further consideration has to be taken into account: Economic reasoning is about institutions providing incentives to economic actors whose actions determine economic development. In that context the noneconomic characteristics of the actors such as nationality, race, beliefs, and so on are largely irrelevant. But that definitely was not the case with the Nazi economy. It is therefore not astonishing that its analysis in purely economic terms cannot grasp its specific National Socialist properties. For in the Third Reich one group of economic actors was not equal to other groups of economic actors with the same economic characteristics, because there applied a differentiation along racial lines. This meant that freedom of contract for Jewish entrepreneurs was more and more restricted until Jews were excluded as economic actors altogether after 1938. Thus, the main difference between the Nazi war-related economy and Western war-related economies of the time can be detected only by an analysis that transcends economics.

⁹⁶ The figure is derived as follows: *Total industrial investment* is taken from *Statistisches Handbuch*, p. 605, for 1938 augmented by investments of sectors not included in the official figures, namely Montan GmbH (Hopmann, *Montan*, p. 121) and aviation industry (BArch R2/5551, Survey on investment and financing of military aviation industry), the latter being allocated to single years according to Montan investments. *Armaments investments* include those of Montan GmbH and the aviation industry. *Autarky investments* are calculated as Four Year Plan investments minus investments in explosives and gun powder (which are already included under armaments investments). However, the well-known data about Four Year Plan investments given by Petzina are not used in this calculation, because they are incorrect due to a transcription error. Therefore information about Four Year Plan investments given by the original source is employed here (Staatsarchiv Nuernberg, NI-8915, Vierjahresplan, Chemischer Erzeugungsplan: Steigerung der Erzeugung, Reich Marshal Goering, January 1943). Data on investments in gun powder and explosives are based on Hopmann, *Montan*, p. 121, table 14.

⁹⁷ For profits, see Spoerer, *Scheingewinne*, p. 147.

REFERENCES

- Abelshauser, Werner, ed. *Die BASF. Eine Unternehmensgeschichte*. München: C. H. Beck, 2002.
- _____. “Rüstungsschmiede der Nation? Der Kruppkonzern im Dritten Reich und in der Nachkriegszeit 1933 bis 1951.” In *Krupp im 20. Jahrhundert. Die Geschichte des Unternehmens vom Ersten Weltkrieg bis zur Gründung der Stiftung*, edited by Lothar Gall, 267–472. Berlin: Siedler, 2002.
- Adamsen, Heiner, R. *Investitionshilfe für die Ruhr. Wiederaufbau, Verbände und Soziale Marktwirtschaft 1948–1952*. Wuppertal: Hammer, 1981.
- Barkai, Avraham. *Nazi Economics. Ideology, Theory, and Policy*. New Haven, CT: Yale University Press, 1990.
- Becker, Willy. *Die deutsche Mineralölwirtschaft*. Ph.D. diss., Berlin, 1936.
- Birkenfeld, Wolfgang. *Der synthetische Treibstoff 1933–1945. Ein Beitrag zur nationalsozialistischen Wirtschafts- und Rüstungspolitik*. Göttingen: Musterschmidt, 1964.
- Bopp, Wolfgang. “The Evolution of the Pricing Policy for Public Orders During the Third Reich.” In *After the Slump: Industry and Politics in 1930's Britain and Germany*, edited by Christoph Buchheim and Redvers Garside, 149–60. Frankfurt/Main: Peter Lang, 2000.
- Bresciani Turroni, Costantino. “The ‘Multiplier’ in Practice: Some Results of Recent German Experience.” *The Review of Economic Statistics* 20, no. 2 (1938): 76–88.
- Buchheim, Christoph. “Die Wirtschaftsentwicklung im Dritten Reich – Mehr Desaster als Wunder.” *Vierteljahrsshefte für Zeitgeschichte* 49, no. 4 (2001): 656–61.
- _____. “The Upswing of German Industry in the Thirties.” In *After the Slump. Industry and Politics in 1930's Britain and Germany*, edited by Christoph Buchheim and Redvers Garside, 33–52. Frankfurt/Main: Peter Lang, 2000.
- Budraß, Lutz. *Flugzeugindustrie und Luftrüstung in Deutschland 1918–1945*. Düsseldorf: Droste, 1998.
- Budraß, Lutz, Jonas Scherner, and Jochen Streb. “Demystifying the German ‘Arment Miracle’ During World War II: New Insights from the Annual Audits of German Aircraft Producers.” Discussion Paper No. 905, Economic Growth Center, Yale University, New Haven, CT, 2005.
- Eichholtz, Dietrich. *Geschichte der deutschen Kriegswirtschaft 1939–1945*, vol. 1. (East-)Berlin: Akademie Verlag, 1969.
- Geer, Johann Sebastian. *Der Markt der geschlossenen Nachfrage. Eine morphologische Studie über die Eisenkontingentierung in Deutschland 1937–1945*. Berlin: Duncker & Humblot, 1961.
- Gregor, Neil. *Daimler-Benz in the Third Reich*. New Haven, CT: Yale University Press, 1998.
- Fraenkel, Ernst. *The Dual State. A Contribution to the Theory of Dictatorship*. New York: Octagon Books, 1941.
- Häberlein, Ludwig. *Das Verhältnis von Staat und Wirtschaft mit besonderer Hervorhebung der Selbstverwaltung des Reichsnährstandes und der Landwirtschaftlichen Marktordnung*. Berlin: Verlag für Staatswissenschaften und Geschichte, 1938.
- Hachtmann, Rüdiger. *Industriearbeit im ‘Dritten Reich’. Untersuchungen zu den Lohn- und Arbeitsbedingungen in Deutschland 1933–1945*. Göttingen: Vandenhoeck und Ruprecht, 1989.
- Hart, Oliver et al. “The Proper Scope of Government: Theory and an Application to

- Prisons.” *Quarterly Journal of Economics* 112, no. 4 (1997): 1127–61.
- Hayes, Peter. *From Cooperation to Complicity: Degussa in the Third Reich*. New York: Cambridge University Press, 2005.
- _____. *Industry and Ideology. IG Farben in the Nazi Era*. Cambridge: Cambridge University Press, 1987.
- Hedemann, Justus W. *Deutsches Wirtschaftsrecht. Ein Grundriß*. Berlin: Junker und Dünnhaupt, 1939.
- Herbst, Ludolf. *Der Totale Krieg und die Ordnung der Wirtschaft. Die Kriegswirtschaft im Spannungsfeld von Politik, Ideologie und Propaganda 1939–1945*. Stuttgart: Deutsche Verlags-Anstalt, 1982.
- Hesse, Jan-Otmar. “Zur Semantik von Wirtschaftsordnung und Wettbewerb in nationalökonomischen Lehrbüchern der Zeit des Nationalsozialismus.” In *Wirtschaftssteuerung durch Recht im Nationalsozialismus. Studien zur Entwicklung des Wirtschaftsrechts im Interventionsstaat des ‘Dritten Reichs’*, edited by Johannes Bähr and Ralf Banken, 473–508. Frankfurt/Main: 2006.
- Höschle, Gerd. *Die deutsche Textilindustrie zwischen 1933 und 1939. Staatsinterventionismus und ökonomische Rationalität*. Stuttgart: Franz Steiner, 2004.
- Hoffmann, Walther G. *Das Wachstum der deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts*. Berlin: Springer, 1965.
- Hopmann, Barbara. *Von der Montan zur Industrieverwaltungsgesellschaft (IVG) 1916–1951*. Stuttgart: Franz Steiner, 1996.
- Kershaw, Ian. *The Nazi Dictatorship. Problems and Perspectives of Interpretation*. London: Arnold, 1993.
- Kockel, Titus. *Deutsche Ölpolitik 1928–1938*. Berlin: Akademie Verlag, 2005.
- Kopper, Christopher. *Zwischen Marktwirtschaft und Dirigismus. Bankenpolitik im ‘Dritten Reich’ 1933–1939*. Bonn: Bouvier, 1995.
- Lorentz, Bernhard. *Industrieelite und Wirtschaftspolitik 1928–1950: Heinrich Dräger und das Drägerwerk*. Paderborn: Schöningh, 2001.
- Lorentz, Bernhard, and Paul Erker. *Chemie und Politik. Die Geschichte der Chemischen Werke Hüls 1938–1980*. München: C. H. Beck, 2003.
- Lurie, Samuel. *Private Investment in a Controlled Economy. Germany 1933–1939*. New York: Columbia University Press, 1947.
- Mason, Tim. “The Primacy of Politics: Politics and Economics in National Socialist Germany.” In *Nazism, Fascism and the Working Class: Essays by Tim Mason*, edited by Jane Caplan, 53–76. Cambridge: Cambridge University Press, 1995 (first published in German in 1966).
- Meyhoff, Andreas. *Blohm & Voss im ‘Dritten Reich’: Eine Hamburger Großwerft zwischen Geschäft und Politik*. Hamburg: Christians, 2001.
- Mollin, Gerhard. *Montankonzerne und ‘Drittes Reich’. Der Gegensatz zwischen Monopolindustrie und Befehlswirtschaft in der deutschen Rüstung und Expansion 1936–1944*. Göttingen: Vandenhoeck & Ruprecht, 1988.
- Müller, Rolf-Dieter. “Albert Speer und die Rüstungspolitik im totalen Krieg.” In *Das Deutsche Reich und der Zweite Weltkrieg*, vol. 5/2, edited by Militärgeschichtliches Forschungsamt, 273–773. Stuttgart: Deutsche Verlags-Anstalt, 1999.
- _____. *Der Manager der Kriegswirtschaft: Hans Kehrl – Ein Unternehmer in der Politik des ‘Dritten Reiches’*. Essen: Klartext-Verlag, 1999.
- _____. “Die Mobilisierung der deutschen Wirtschaft für Hitlers Kriegsführung.” In *Das Deutsche Reich und der Zweite Weltkrieg*, vol. 5/1, edited by Militärgeschichtliches Forschungsamt. Stuttgart: Deutsche Verlags-Anstalt, 1988.
- Nagel, Alfred von. *Methanol. Treibstoff: Hochdrucksynthesen der BASF (= Schriften-*

- reihe des Firmenarchivs der BASF 5). Ludwigshafen: BASF AG, 1970.
- Neumann, Franz. *Behemoth: The Structure and Practice of National Socialism*. London: Victor Gollancz, 1942.
- Overy, Richard. *Why the Allies Won*. London: Jonathan Cape, 1995.
- _____. *The Nazi Economic Recovery 1932–1938*. Cambridge: Cambridge University Press, 1994.
- _____. *War and Economy in the Third Reich*. Oxford: Clarendon, 1994.
- Peter, Roland. *Rüstungspolitik in Baden: Kriegswirtschaft und Arbeitseinsatz in einer Grenzregion im Zweiten Weltkrieg*. München: Oldenbourg, 1995.
- Petzina, Dietmar. “Vierjahresplan und Rüstungspolitik.” In *Wirtschaft und Rüstung am Vorabend des Zweiten Weltkriegs*, edited by Friedrich Forstmeier and Hans-Erich Volkmann, 65–80. Düsseldorf: Droste, 1975.
- _____. *Autarkiepolitik im Dritten Reich. Der nationalsozialistische Vierjahresplan*. Stuttgart: Deutsche Verlags-Anstalt, 1968.
- Plumpe, Werner. “Unternehmen im Nationalsozialismus. Eine Zwischenbilanz.” In *Wirtschaftsordnung, Staat und Unternehmen. Neue Forschungen zur Wirtschaftsgeschichte des Nationalsozialismus. Festschrift für Dietmar Petzina zum 65. Geburtstag*, edited by Werner Abelshauser et al., 243–66. Essen: Klartext-Verlag, 2003.
- Prollius, Michael von. *Das Wirtschaftssystem der Nationalsozialisten 1933–1939. Steuerung durch emergente Organisation und politische Prozesse*. Paderborn: Schöningh, 2003.
- Ritschl, Albrecht. *Deutschlands Krise und Konjunktur 1924–1934. Binnenkonjunktur, Auslandsverschuldung und Reparationsproblem zwischen Dawes-Plan und Transfersperre*. Berlin: Akademie Verlag, 2002.
- _____. “Die NS-Wirtschaftsideologie – Modernisierungsprogramm als reaktionäre Utopie.” In *Nationalsozialismus und Modernisierung*, edited by Michael Prinz and Rainer Zitelmann, 48–70. Darmstadt: Wissenschaftliche Buchgesellschaft, 1991.
- _____. “Zum Verhältnis von Markt und Staat in Hitlers Weltbild. Überlegungen zu einer Forschungskontroverse.” In *Die Schatten der Vergangenheit*, edited by Uwe Backes et al., 243–64. Frankfurt/Main: Propyläen, 1990.
- Román, Elena San, and Carles Sudrià. “Synthetic Fuels in Spain, 1942–1966: The Failure of Franco’s Autarkic Dream.” *Business History* 45, no. 4 (2003): 73–88.
- Scherner, Jonas. “‘Ohne Rücksicht auf die Kosten’? Eine Analyse von Investitionsverträgen zwischen Staat und Unternehmen im ‘Dritten Reich’ am Beispiel des Förderprämienverfahrens und des Zuschussvertrags.” *Jahrbuch für Wirtschaftsgeschichte* 2004: 167–88.
- _____. “Zwischen Staat und Markt. Die deutsche halbsynthetische Chemiefaserindustrie in den 1930er Jahren.” *Vierteljahrsschrift für Sozial- und Wirtschaftsgeschichte* 89, no. 4 (2002): 427–48.
- Schmidt, Klaus M. “The Costs and Benefits of Privatization: An Incomplete Contracts Approach.” *Journal of Law, Economics and Organization* 12, no. 1 (1996): 1–24.
- Schneider, Michael C. *Unternehmensstrategien zwischen Weltwirtschaftskrise und Kriegswirtschaft: Chemnitzer Maschinenbauindustrie in der NS-Zeit 1933–1945*. Essen: Klartext-Verlag, 2005.
- _____. “Business Decision Making in National Socialist Germany: Machine Tools, Business Machines, and Punch Cards at the Wanderer-Werke AG.” *Enterprise & Society* 3 (2002): 396–428.
- Schweitzer, Arthur. *Big Business in the Third Reich*. Bloomington: Indiana University

- Press, 1964.
- Shirley, Mary, and Patrick Walsh. *Public versus Private Ownership: The Current State of the Debate*. Washington, DC: World Bank, 2000.
- Shleifer, Andrei. "State versus Private Ownership." *Journal of Economic Perspectives* 12, no. 4 (1998): 133–50.
- Spoerer, Mark. "Industrial Profitability in the Nazi Economy." In *After the Slump. Industry and Politics in 1930s Britain and Germany*, edited by Christoph Buchheim and Redvers Garside, 53–80. Frankfurt/Main: Peter Lang, 2000
- _____. *Von Scheingewinnen zum Rüstungsboom. Die Eigenkapitalrentabilität der deutschen Industrieaktiengesellschaften 1925–1941*. Stuttgart: Steiner, 1996.
- Statistisches Handbuch von Deutschland 1928–1944*. München: Ehrenwirth, 1949.
- Steiner, André. "Zur Neueinschätzung des Lebenshaltungskostenindex für die Vorkriegszeit des Nationalsozialismus." In *Jahrbuch für Wirtschaftsgeschichte* (forthcoming).
- Stokes, Raymond G. "Von der I.G. Farbenindustrie AG bis zur Neugründung der BASF (1925–1952)." In *Die BASF. Eine Unternehmensgeschichte*, edited by Werner Abelshauser, 221–358. München: C. H. Beck, 2002
- Streb, Jochen. *Staatliche Technologiepolitik und branchenübergreifender Wissens-transfer. Über die Ursachen der internationalen Innovationserfolge der deutschen Kunststoffindustrie im 20. Jahrhundert*. Berlin: Akademie Verlag, 2003
- Temin, Peter. "Soviet and Nazi Economic Planning in the 1930s." *Economic History Review* 44, no. 4 (1991): 573–93.
- _____. *Lessons from the Great Depression*. Cambridge, MA: MIT Press, 1989.
- Tooze, J. Adam. "'Punktuelle Modernisierung': Die Akkumulation von Werkzeugmaschinen im 'Dritten Reich'." In *Jahrbuch für Wirtschaftsgeschichte* 2003: 79–98.
- Wagner, Bernd C. *IG Auschwitz, Zwangsarbeit und Vernichtung von Häftlingen des Lagers Monowitz 1941–1945*. München: Saur, 2000.
- Wawerla, Wilhelm, and Lorenz Ambrosius. *Das Haushaltsrecht* (= Grundriss des Verwaltungsrechts, vol. 1). Düsseldorf: Schwann, 1958.
- BASF-Archives, Ludwigshafen
- Bundesarchiv (BArch), Berlin
- Krupp-Archives, Essen
- Mannesmann-Archives, Mülheim an der Ruhr
- Rheinisch-Westfälisches Wirtschaftsarchiv, Köln
- Thyssen-Krupp-Archives, Duisburg